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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/656,652

Filing Date: September 04, 2003

Appellant(s): CHALUPSKY ET AL.

Ramin Aghevli
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/30/08 appealing from the Office action mailed 9/24/07.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2004/0003296 A1	ROBERT ET AL.	1-2004
6,298,042 B1	MURASE ET AL.	10-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international

application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-12, 14-19, 21-24, 26-34, 36, 38-39, 41-42, 44-45, and 47-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Robert et al. (Robert), U.S. Publication No. 2004/0003296 A1.

As to claim 1, Robert discloses a method comprising: selectively determining a new transmission speed different from a current transmission speed between a local network device and a linked network device in response to a speed change event ([0019], ln. 1-7; [0020], ln. 1-12); and transmitting a speed change request and the new transmission speed to the linked network device to request the local and linked network devices to communicate at the new transmission speed, wherein the transmitting occurs while maintaining a linked exchange between the local and linked network devices ([0023], ln. 1-3; [0024] – [0025]).

As to claim 2, Robert discloses transmitting the speed change request comprises including the speed change request and the new transmission speed in a data packet being transmitted to the linked network device at the current transmission speed ([0023], ln. 1-3; [0024] – [0025]; [0026], ln. 1-5).

As to claim 4, Robert discloses the linked network device in response to the speed change request returns positive acknowledgment to the local network device if the linked network device is capable of transmitting at the new transmission speed ([0024] – [0026]).

As to claim 5, Robert discloses the local and linked network devices continue to transmit data at the current transmission speed until the linked network device returns a positive acknowledgment ([0023]).

As to claim 6, Robert discloses the linked network device in response to the speed change request returns negative acknowledgment to the local network device if the linked network device is not capable of transmitting at the new transmission speed ([0023]).

As to claim 7, Robert discloses the operation to change the transmission speed comprises an operation to either increase the transmission speed if the local network device is capable of transmitting at a transmission speed that is higher than the current transmission speed or decrease the transmission speed if the local network device is capable of transmitting at a transmission speed that is lower than the current transmission speed ([0023] – [0027]).

As to claim 8, Robert discloses maintaining transmission information indicating transmission capabilities of the linked network device, wherein the determined new transmission speed is a new transmission speed that the transmission information indicates that the linked network device is capable of performing ([0023]).

As to claim 9, Robert discloses setting a register in the local network device to indicate the new transmission speed, wherein a device driver used to communicate with the local network device determines the new transmission speed, wherein setting the register in the local network device comprises the device driver changing advertised capabilities of the local network device indicated in the register, and wherein transmitting the speed change request comprises restarting an auto-negotiation process that selects a common transmission speed based on the changed advertised capabilities in the local network device (Fig. 1-2; [0023] – [0026]).

As to claim 10, Robert discloses the determined new transmission speed is higher than the current transmission speed, and wherein changing the advertised capabilities comprises removing any transmission speeds indicated in the advertised capabilities of the local network device that are less than the determined new transmission speed (Fig. 1-2; [0023] – [0027]).

As to claim 11, Robert discloses the determined new transmission speed is lower than the current transmission speed, and wherein changing the advertised capabilities comprises removing any transmission speeds indicated in the advertised capabilities of the local network device that are higher than the determined new transmission speed (Fig. 1-2; [0023] – [0027]).

As to claim 12, Robert discloses the speed change event comprises an application program determining an anticipated increase of data transmission through the local network device, and wherein the new transmission speed is higher than the current transmission speed ([0027]).

As to claims 14, 23, and 48, the claims are rejected for the same reasons as claim 1 above.

As to claims 15 and 26, the claims are rejected for the same reasons as claim 4 above.

As to claims 16 and 27, the claims are rejected for the same reasons as claim 5 above.

As to claims 17 and 28, the claims are rejected for the same reasons as claim 6 above.

As to claims 18 and 29, the claims are rejected for the same reasons as claim 7 above.

As to claims 19 and 30, the claims are rejected for the same reasons as claim 8 above.

As to claim 21, the claim is rejected for the same reasons as claim 1 above.

Additionally, Robert discloses a workstation system ([0017] – [0018]).

As to claims 22 and 31, the claims are rejected for the same reasons as claim 9 above.

As to claim 24, the claim is rejected for the same reasons as claim 2 above.

As to claim 32, the claim is rejected for the same reasons as claim 10 above.

As to claim 33, the claim is rejected for the same reasons as claim 11 above.

As to claim 34, the claim is rejected for the same reasons as claim 12 above.

As to claim 36, Robert discloses the speed change event is based on a change in desired power consumption ([0006]; [0008]; [0011]).

As to claims 38, 41, 44, 47, and 49-50, the claims are rejected for the same reasons as claim 5 above.

As to claims 39, 42, 45, and 51, the claims are rejected for the same reasons as claim 36 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 13, 20, 25, 35, 37, 40, 43, 46, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert as applied to claims 1, 14, 21, 23, and 48 above, in view of Murase et al. (Murase), U.S. Patent No. 6,298,042 B1.

As to claim 3, Robert discloses the invention substantially as in parent claim 1, including transmitting the speed change request comprises including the speed change request and the new transmission speed in a data packet at the current transmission speed ([0023], ln. 1-3; [0024] – [0025]; [0026], ln. 1-5).

Robert is silent on the packet being a preamble packet that is transmitted at the beginning of data packets or, alternatively, in an idle transmission between packets to synchronize data transmissions.

However, Murase discloses the packet being transmitted in an idle transmission between packets to synchronize data transmissions (Col. 3, ln. 64 – Col. 4, ln. 21; Col. 4, ln. 37-40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Robert by using an idle transmission to synchronize data transmissions as taught by Murase in order to prevent the network from being suddenly applied with a high load without any rapid change of the actual transmission rate to a high value (Murase: Col. 3, ln. 45-47).

As to claim 13, Robert discloses the invention substantially as in parent claim 1, but is silent on the speed change event is based on a detected change in network traffic at the local network device.

However, Murase discloses the speed change event is based on a detected change in network traffic at the local network device (Col. 3, ln. 64 – Col. 4, ln. 21).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Robert by detecting a change in network traffic to change speed as taught by Murase in order to prevent the network from being suddenly applied with a high load without any rapid change of the actual transmission rate to a high value (Murase: Col. 3, ln. 45-47).

As to claims 20, 35, 37, 40, 43, 46, and 52, the claims are rejected for the same reasons as claim 13 above.

As to claim 25, the claim is rejected for the same reasons as claim 3 above.

(10) Response to Argument

- **Argument 1** (see pages 13-14 of the appeal brief)

“As can be seen, Robert at least fails to teach (or even suggest) ‘selectively determining ... in response to a speed change event.’”

In response to argument 1, the Examiner notes that Robert clearly discloses the selective determination of a new transmission speed in response to a speed change event. Robert discloses initially setting the network transmission speed through the use of autonegotiation with a link partner ([0019]). Then, in response to a powerdown request ([0023], the powerdown request being analogous to the speed change event of the claim), autonegotiation occurs again in order to utilize a low-power network transmission speed ([0026], lines 1-5).

This is spelled out in greater detail in the paragraphs of Robert discussing the benefit of such a system. For example, Robert discloses that the “disclosed embodiment enables a workstation to utilize a high-speed data rate for optimum bandwidth during active use, while minimizing power consumption by utilizing a low-power data rate such as 10BaseT during periods of inactivity” ([0027], lines 1-5). Additionally, the abstract of Robert discloses clearly that the network transmission speed is selectively determined in response to a speed change request: “the controller overrides the physical layer transceiver, having selected the high-speed data rate based on autonegotiation, to renegotiate for the low data rate, enabling low-power operation at the low data rate” (Abstract, lines 12-15, emphasis added by Examiner).

In summary, clearly the teachings of Robert disclose a method by which a high data rate (transmission speed) may be renegotiated to a low data rate (new transmission speed) in response to a powerdown request (speed change event).

- **Argument 2** (see page 14 of the appeal brief)

“[T]he Examiner appears to indicate Robert only transmits a ‘power down request’ and not the claimed ‘new transmission speed.’”

In response to argument 2, the Examiner discussed in response to argument 1 how the powerdown request of Robert results in a new transmission speed: “in response to a powerdown request ([0023], the powerdown request being analogous to the speed change event of the claim), autonegotiation occurs again in order to utilize a low-power network transmission speed ([0026], lines 1-5).”

Clearly, as stated before, Robert discloses the powerdown request resulting in a low data rate: “For example, Robert discloses that the ‘disclosed embodiment enables a workstation to utilize a high-speed data rate for optimum bandwidth during active use, while minimizing power consumption by utilizing a low-power data rate such as 10BaseT during periods of inactivity’ ([0027], lines 1-5).”

- **Argument 3** (see page 15 of the appeal brief)

“Robert teaches away from maintaining a linked exchange because ... autonegotiation ... is to be restarted.”

In response to argument 3, the Examiner notes that in Robert's teachings the autonegotiation and subsequent renegotiation are both between the workstation and a "link partner" ([0019], line 2; [0023], lines 5-6). Therefore, the autonegotiation and renegotiation are themselves linked exchanges of data (in which the workstation and its link partner negotiate a speed). So, the very act of negotiating a transmission speed requires existence of the linked exchange between a local and linked network device, as otherwise the link partners could not communicate in order to set or reset a transmission speed.

- **Argument 4** (see page 16 of the appeal brief)

As to claim 2, "the cited portion of Robert fails to even mention the word 'packet' or that a packet is to include 'the speed change request and the new transmission speed' in the data packet 'being transmitted to the linked network device at the current transmission speed.'"

In response to argument 4, the Examiner notes paragraph [0017] of Robert, which states that the workstation is "configured for sending and receiving data packets according to IEEE 802.3" ([0017], lines 1-6). Clearly, the communications between devices in the network utilize IEEE 802.3 data packets.

Additionally, the physical layer itself also makes use of data packets. Robert states the "physical layer receiver 16 [is] configured for translating digital packet data" ([0017], lines 7-8).

So clearly, the autonegotiation and renegotiation steps (as discussed in the preceding responses to arguments) between linked network devices in the IEEE 802.3 network utilize digital packet data in the disclosed embodiment of Robert's teachings.

- **Argument 5** (see page 16 of the appeal brief)

"[N]othing in [0023] of Robert teaches (or even suggests) that 'the local and linked network devices continue to transmit data at the current transmission speed until the linked network device returns a positive acknowledgment.'"

In response to argument 5, the Examiner reiterates the point made in response to argument 3, namely that communication between the linked devices must occur in order to renegotiate a new transmission speed. Paragraph [0023] of Robert discloses that "if the link partner is a legacy 100Base-TX system incapable of negotiating down to 10 Mbps, the controller 20 prepares in step 38 a response indicating that the low-power request failed" ([0023], lines 6-9). Clearly, if the system is not capable of renegotiating down to a lower speed such as 10 Mbps, the transmission in the network would continue at the "legacy

100Base-TX." Nothing in Robert suggests that network communications should completely halt if a powerdown request cannot be processed. Such an act would disable communications, going completely against the intended purpose of networking which is enabling communications. Furthermore, it is known in the art that autonegotiation of a network speed (such as described by Robert) results in setting a speed supported by both systems. Therefore, if the powerdown request fails because one or more of the devices does not support the proposed low data rate, then the autonegotiation will instead settle upon a data rate supported "in order of descending priority, 100Base-TX, full duplex, 100Base-TX, half duplex, 10BaseT, full duplex, or 10BaseT, half duplex" ([0019], lines 4-7).

So, in summary, the autonegotiation and renegotiation occur at a speed supported by the system until such a time as a lower date rate, such as 10Mbps, is negotiated. If the system is a legacy device, such as 100Base-TX, communication continues in the network at this speed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Brian P. Whipple

/B. P. W./

Examiner, Art Unit 2152

8/19/08

Conferees:

/Bunjobj Jaroenchonwanit/

Supervisory Patent Examiner, Art Unit 2152

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2146